ABSTRACT

A collaborative object architecture with one or more of the following technologies: 1) lightweight asynchronous messaging; 2) collaborative objects; 3) optimistic concurrency control; and 4) transparent object serialization. Lightweight asynchronous messaging allows highly responsive interactivity and natural interactions with minimal network loads. Collaborative objects allow ubiquitous sharing and provides each user with the same copy of the shared object. Optimistic concurrency control allows full-duplex group editing and natural interactions. Transparent object serialization provides real world persistence and support for asynchronous changes. Thus, combination of these technologies provides a collaborative object architecture with several advantages over the prior art.